

Public Private Partnership in bean seed systems in Africa is key to sustainability

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CIAT

BRAND
GUIDELINES

Variety release

Phase	Period	Number of varieties
Phase 1-4	Before 2000	284
Phase 5	2001-2004	96 (380)
Phase 6	2004-2008	119
Phase 7	2009-2014	238

357 in the last ten years)

Centralized seed system (before 2004)

1

Breeder seeds (NARS)



2

Basic seeds (NARS)



3

Certified Seed 1
(Private seed
producers)



4

Certified seed 2



5

Farmers



Traders

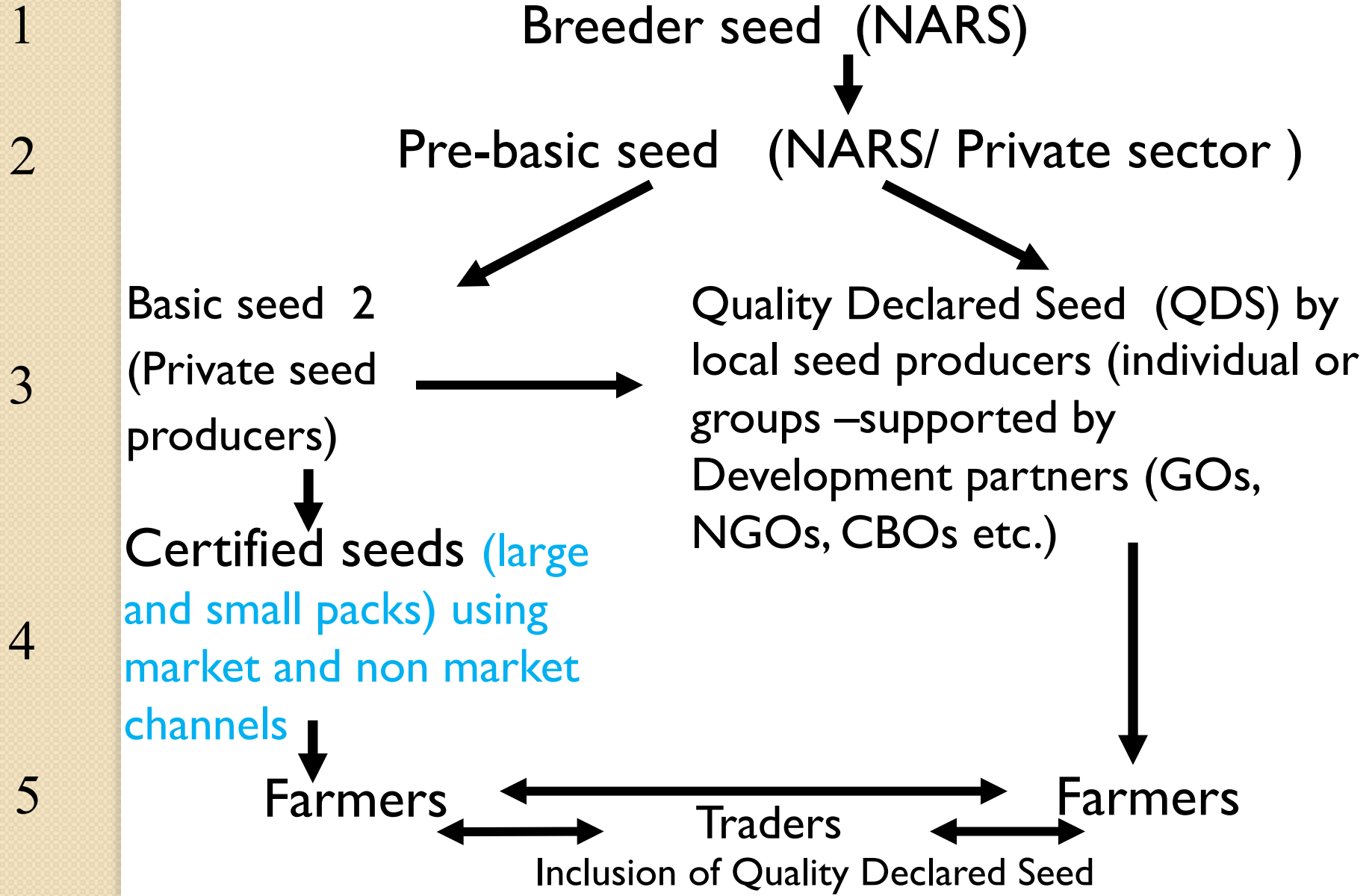


Farmers

Some challenges before 2004

- Limited information/knowledge on varieties and seed systems (centralized and decentralized)
- Inadequate supply and limited diversity of seed sources
- Limited client oriented seed marketing (centralized)
- Inefficiency in the seed production
- Delays in availing varieties to farmers:
 - Delays in variety use after release

Integrated Seed System for wider impact (2004)

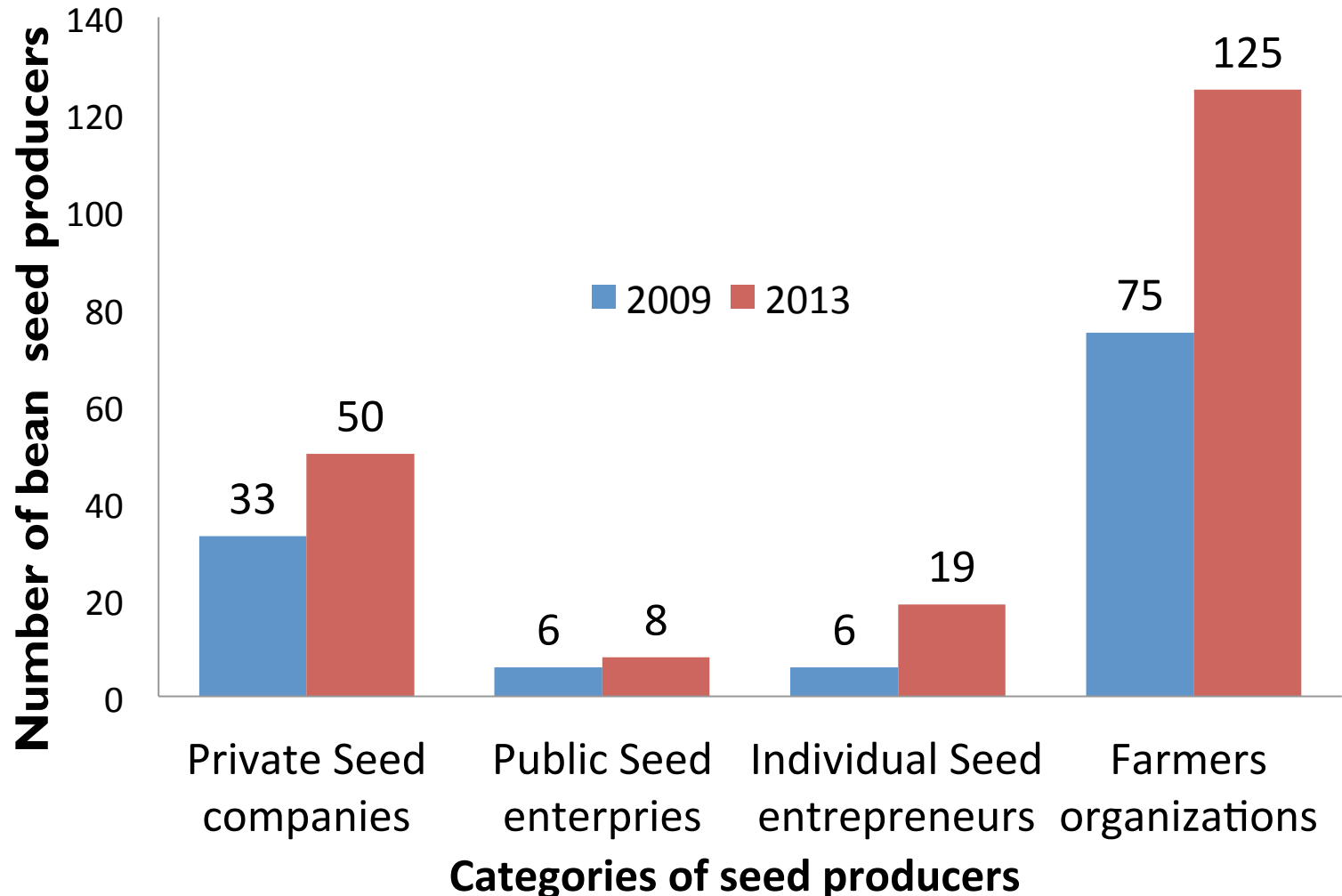


Use of certified bean seed (% area sown) in selected African countries

Country	2004	2010	2014
Ethiopia	<1	5.4	15.6
Kenya	<2	3.4	5.9
Malawi	<1	5.2	5.2
Uganda	3.6	6.3	8.9

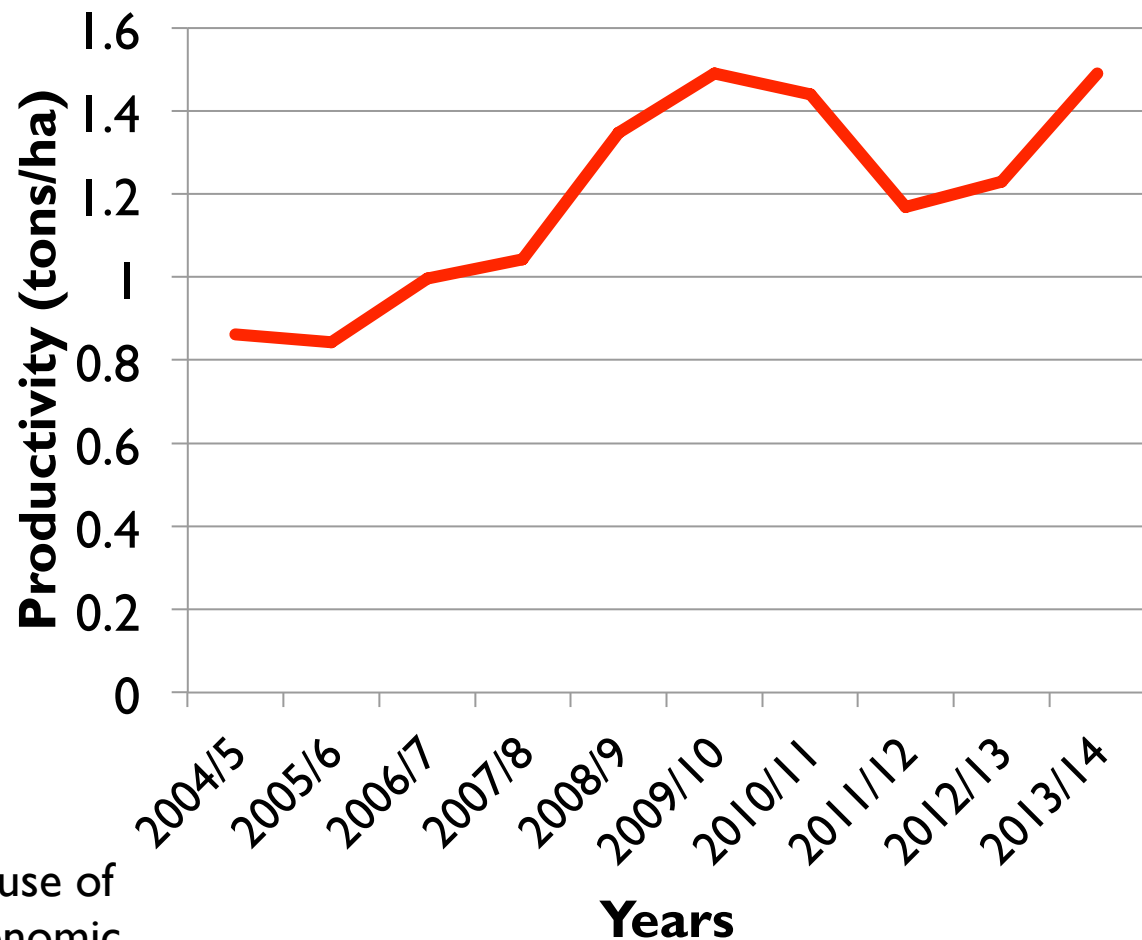
Multi-functional partnership established

**Evolution of number of common bean producers in
ESA, by category of actors (2007-2013)**



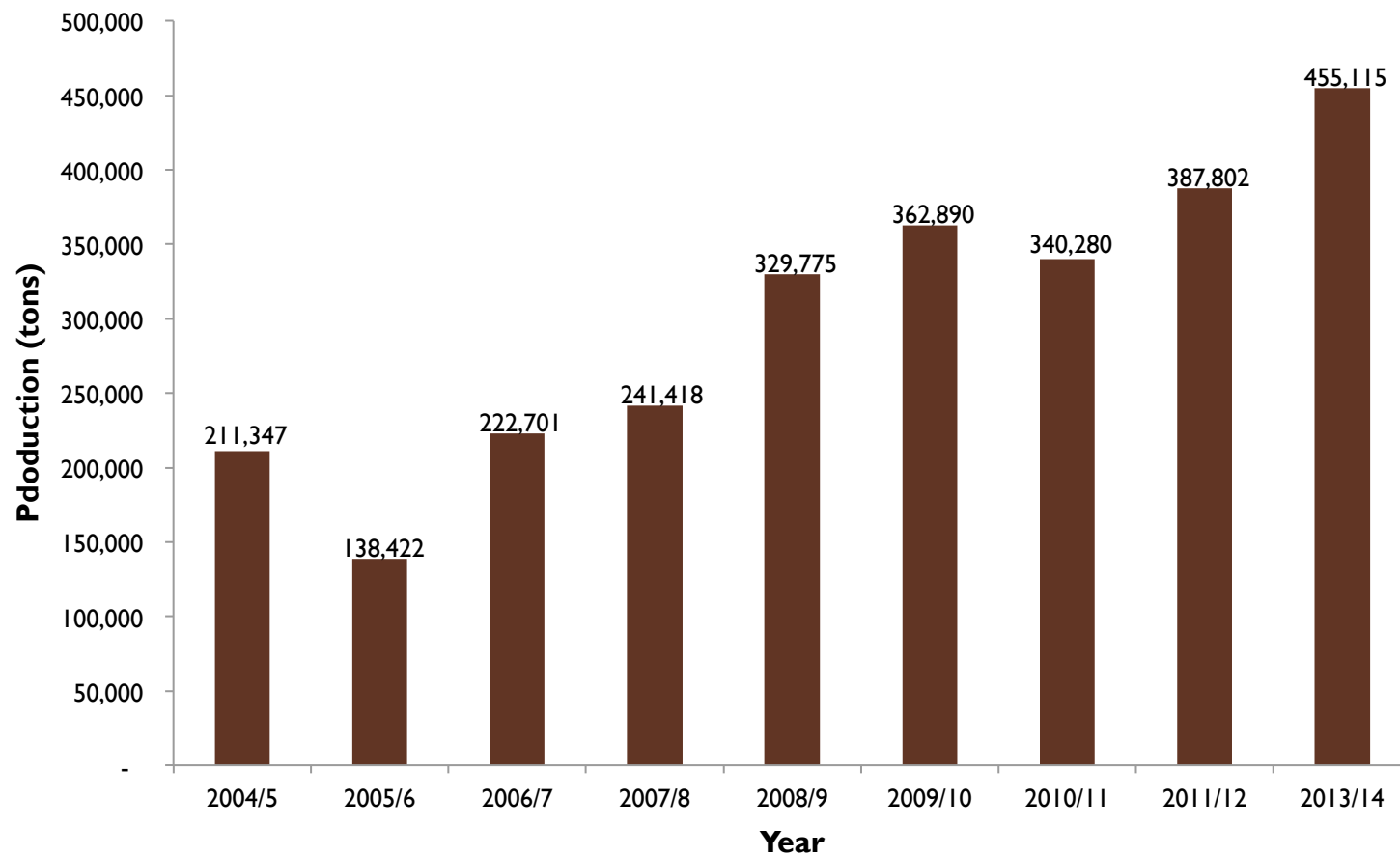
Increased bean productivity: case of Ethiopia (2004/5-2013/14).

More than 70% increase in bean productivity: from 0.86 tons per ha to 1.49 tons per ha between 2004 and 2014.

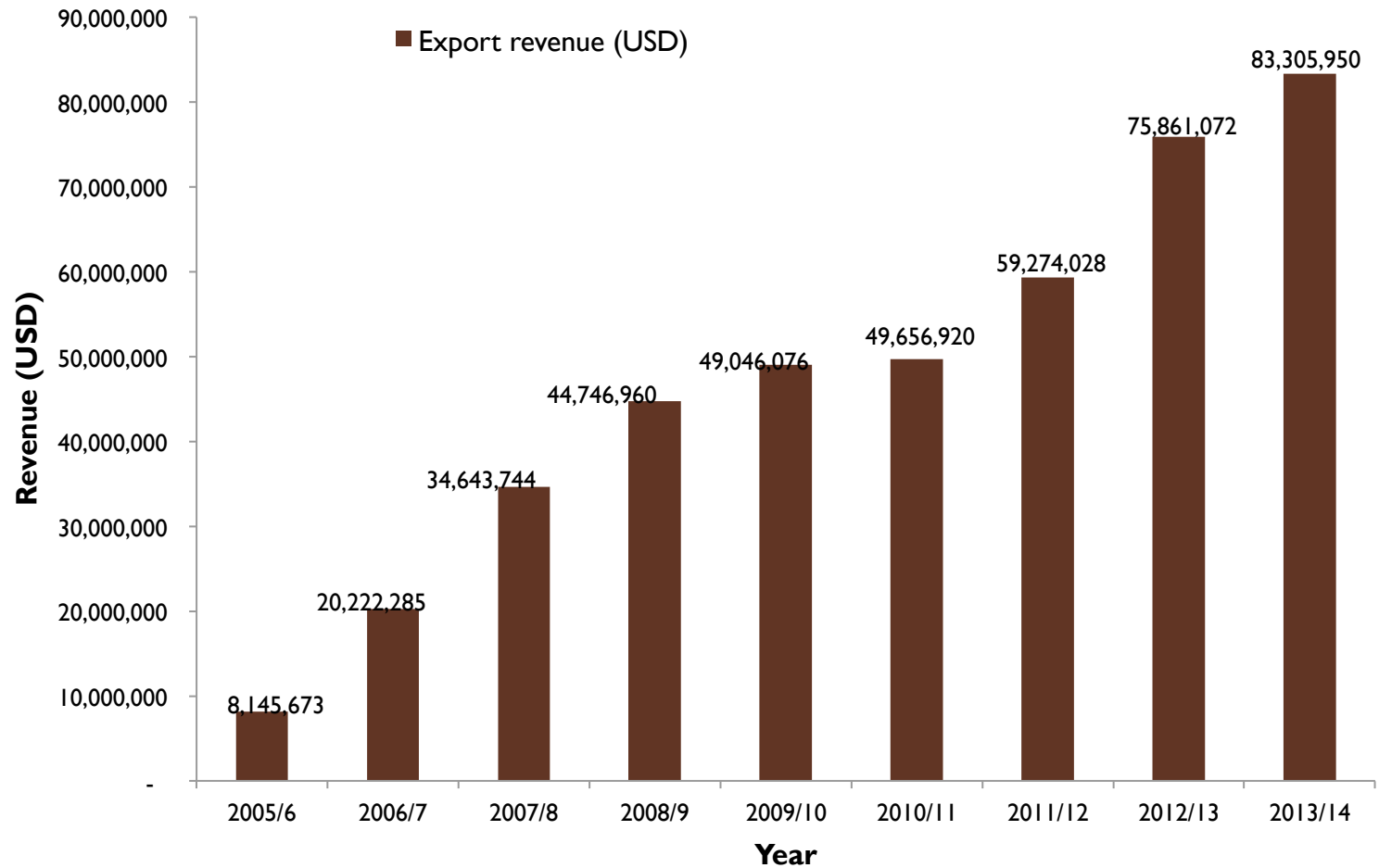


Reliable grain market pulls use of quality seed, improved agronomic practices, grain quality etc.

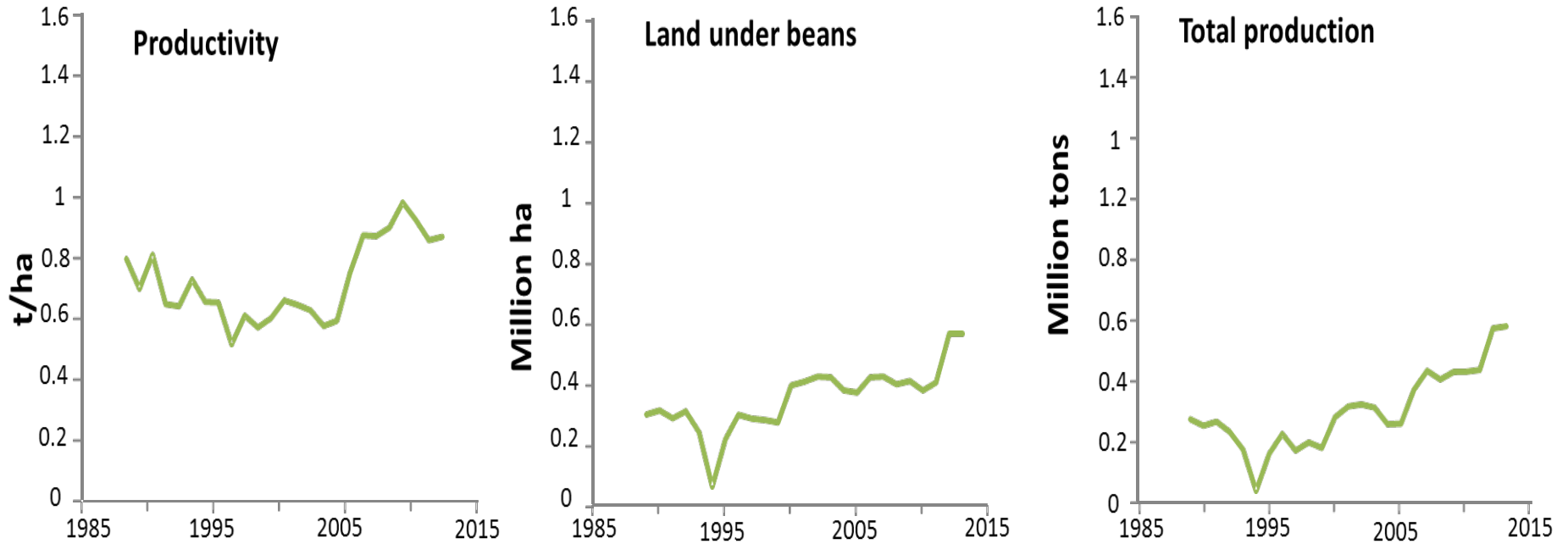
Trend of bean production in Ethiopia



Trend of bean export revenue in Ethiopia

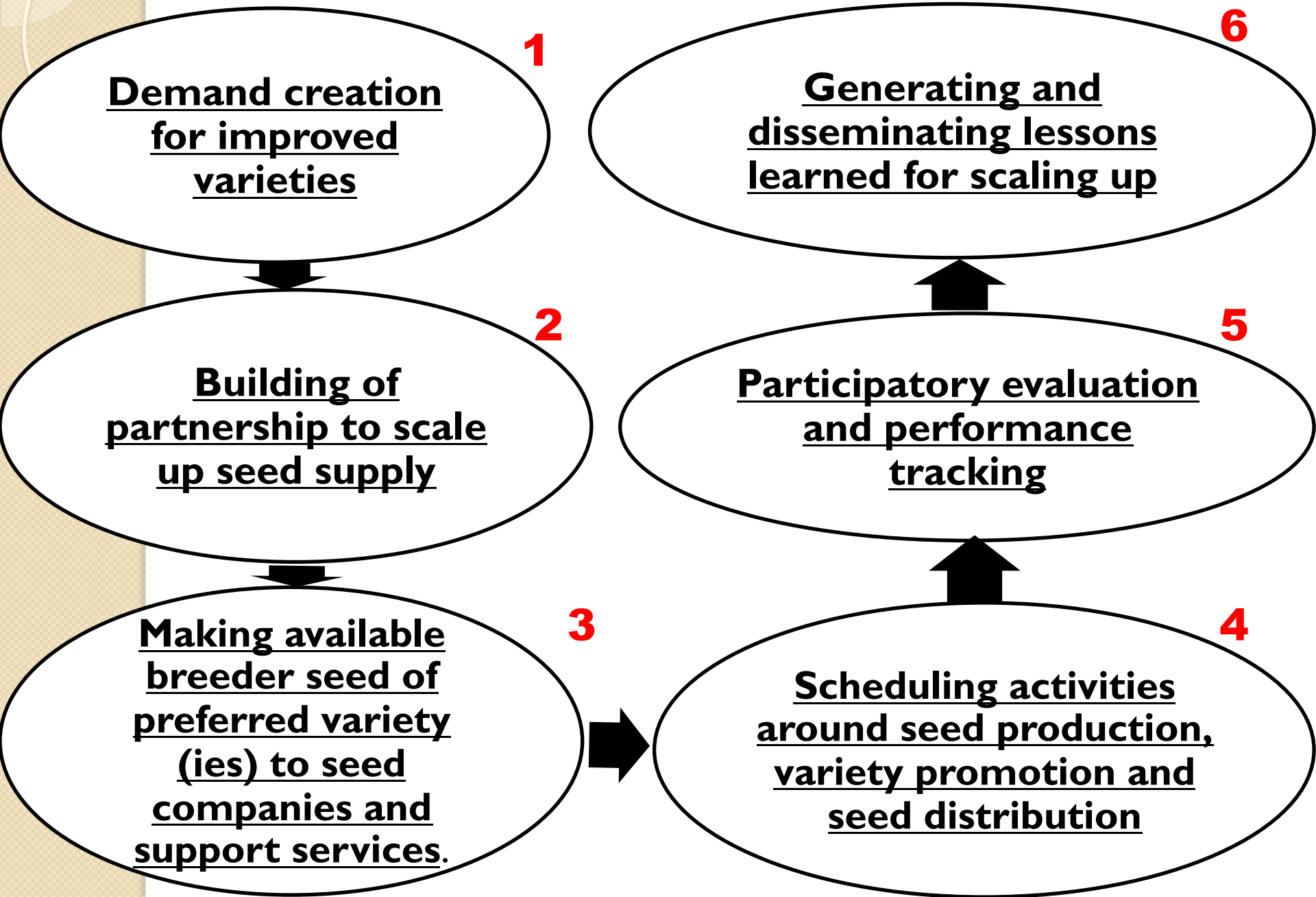


COMPARING PRODUCTIVITY, LAND UNDER BEANS AND TOTAL PRODUCTION: RWANDA



Source: FAOSTAT 2014

The PPPs process



Adoption of innovative approaches for fast and efficient distribution of bean seed.

- Sale of seed in small pocket-friendly packs
 - Wider impact strategy
 - Convenient and affordable access by farmers
 - Affordable testing of new varieties
 - Diversity of bean varieties accessed

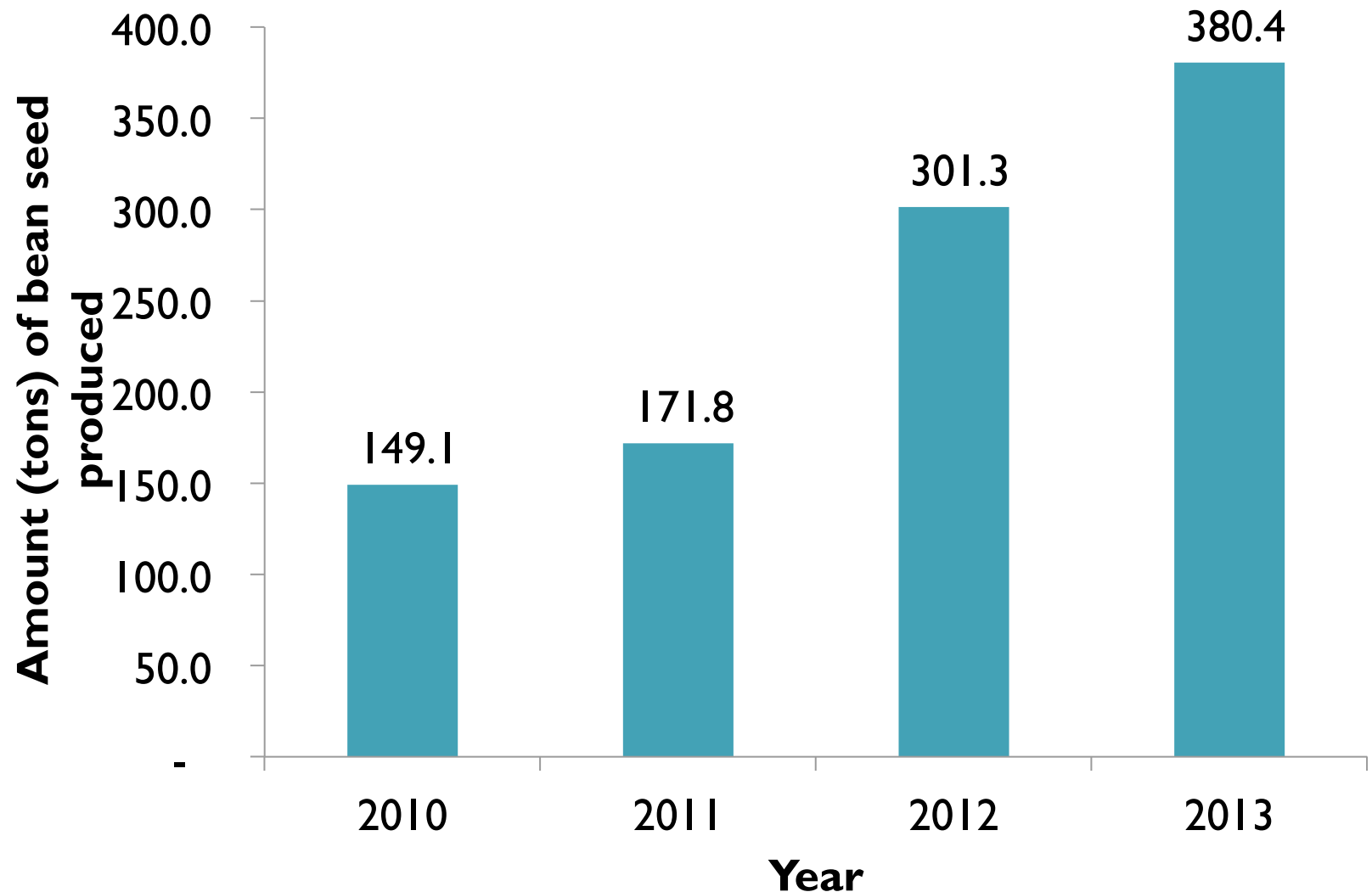


Increasing demand of quality bean seed pulled by differentiated /profitable grain market/nutrition



As result of intensive demand creation, farmers increasingly realizing the value of varieties and their utilization

Increased bean seed production: case of CEDO – Uganda (2010-2013).



Some constraints of private seed companies

- Limited availability of breeder/basic seed from NARS
- Inadequate knowledge on quality bean seed production/post harvest and business/marketing skills
- Inadequate capacity of seed services to inspect seed fields

Cost sharing - breeder

- 1:3 seed ratio:
(DARS 1 and
private company : 3)
- In kind payment
(breeder seed
equivalent)
- Contracting
arrangement

Dr. Reuben Otsyula
KALRO



Breeder Seed Production (kg)

Year	2013	2014	2015
DARS-EX Agris (Malawi)	55	1,563	2,500
KALRO–Bubayi (Kenya)	2,000	3,600	23,000
Total	2,055	5,163	25,500

Results: basic seed (tons)

Year	2013	2014	2015
DARS-EX Agris	0.8	15.0	36.2
KALRO –Bubayi		30.0	72.0
Total	0.8	45.0	108.2

What did PABRA (NARS/CIAT) bring on board?

- Facilitate the partnerships between NARS and private companies
- Technical backstopping, training on bean seed pre and post harvest technologies and seed business
- Facilitate linkages between certified seed producers and basic/breeder seed producers
- Supportive messages on utilization e.g. nutrition messages (iron and zinc) or marketability
- Engagement with policy makers (national and regional EAC, SADC, COMESA etc.)

Future plans

- Explore the possibility of co-owning the released varieties (rather than being NARS sole property) – management/sharing the IP (CIAT/NARS/private seed companies)
- Bring in the private sector on board before the release and grant exclusive/non exclusive!! rights
- Private sector to pay some royalties to support breeding or nucleus seed production
- Integrating QDS and support to private companies (for synergies and impact)

What are sustainable institutional mixes for delivering and out-scaling seed and complementary technologies?

Seed system support Innovations under Syngenta Foundation for Sustainable Agriculture (SFSA)

- Strengthen multiple varieties release across countries – for economy of scale –wider market/ cross border seed trade
- Facilitate variety licensing to seed companies and wider commercialization of bean seed
- Fine-tune and deploy embedded crop insurance in the seed price to pull the use of certified seed (two students) PABRA/CCAFS-UoN
- Marketing test and scale up use of seed dressing systemic Apron Star (fungicide +insecticide) – pull seed ?

Other areas to expand seed systems/ ICM

- Mechanization of small and medium holders
 - Participatory testing and strengthen supply value
- Production efficiency
 - Weed control –strengthen supply chain
 - Environment effects??
 - Soil fertility (foliar feed/ boosters!!)



Thank you

